

Common Name: Atlantic wolffish

Scientific Name: *Anarhichas lupus*

Area of Concern: Georges Bank and western Gulf of Maine (discrete from wolffish in Browns Bank-Scotian Shelf area).

Year First Listed as a "Species of Concern": 2004



Species Description:

**Life history:** Wolffish may reach lengths of 150 cm and weights of 18 kg. Generally a solitary fish although some colonial settlements have been documented (Collette and MacPhee 2002). Males and females form bonded pairs during the spring and summer. Spawning varies depending on latitude. Eggs are laid in large clusters and are guarded by the parental male. Females produce between 5,000 and 12,000 eggs depending on size. Incubation is believed to last four to nine months (Collette and MacPhee 2002).

Atlantic wolffish feed primarily on benthic fauna. While the diet of this species shows strong regional variation, it consists mainly of various species of mollusks, crustaceans, and echinoderms.

**Habitat:** Wolffish appear to prefer areas with complex bottom substrates such as rocky outcroppings or seaweed beds (Collette and MacPhee 2002). Collette and MacPhee (2002) suggest that feeding takes place away from the shelter sites.

Rationale for "Species of Concern" Listing:

Demographic and Diversity Concerns:

West of Scotian Shelf, highest abundance appears to be in southwestern portion of Gulf of Maine from Jeffreys Ledge to Great South Channel at depths of 80 to 120 m. NEFSC spring bottom trawl survey biomass index fluctuated from 1.0 kg/tow and 2.0 kg/tow between 1968 and 1988, but has shown consistent downward trend since late 1980s.

1997-1999 biomass indices were less than 0.2 kg/tow, which is the lowest in the survey time series at about 8% of the 1968-1988 average.

Decline since the late 1980s indicates that biomass has been substantially reduced. This stock remains overexploited and severely depleted.

Factors for Decline:

Primarily taken as bycatch in otter trawl fishery, although has been component of mixed trawl fisheries. Recreational catches are insignificant.

In the last two decades, U.S. vessels have taken more than 85% of total Georges Bank-Gulf of Maine catch; remainder was by Canadian fishermen. According to Mayo (2000), the commercial catch of this species in the U.S. has been evenly divided between Georges Bank and the Gulf of Maine since 1970. In 1970, total U.S. landings from this area were approximately 200 metric tons (mt). This increased to approximately 1,200 mt in 1984 but declined sharply to less than 500 mt in 1992. Landings declined even further to 300 mt in 1998 and 249.6 mt in 2001.

The Atlantic wolffish is also affected by indirect negative impacts from human related activities. In 2000, Atlantic wolffish were listed as a species of special concern in Canada. One of the reasons cited for this designation was that in addition to being taken as bycatch, this species is also likely impacted by the degradation of its habitat from trawling and dredging activities (O'Dea and Haedrich 2002). Bottom trawling causes the re-suspension of bottom sediments, which can smother spawning areas, damage gills, and release settled toxic heavy metals.

Not presently managed.

Status Reviews/Research Completed or Underway:

Last updated 4/13/2004

*For further information on this Species of Concern, or on the Species of Concern Program in general, please contact Ms. Marta Nammack, NMFS, Office of Protected Resources, 1315 East West Highway, Silver Spring, MD 20910, (301) 713-1401, x180, [Marta.Nammack@noaa.gov](mailto:Marta.Nammack@noaa.gov); or Kimberly Damon-Randall, NMFS, Northeast Region, One Blackburn Drive, Gloucester, MA 01930-2295, (978) 281-9328, x6535, [Kimberly.Damon-Randall@noaa.gov](mailto:Kimberly.Damon-Randall@noaa.gov).*

References:

Collette, B.B. and G. Klein-MacPhee. 2002. Fishes of the Gulf of Maine. Smithsonian Institution Press. Washington and London. 748 pages.

Mayo, R. 2000. *In* NEFSC. Status of the Fishery Resources off the Northeastern United States. NOAA Technical Memorandum NMFS-NE-115.

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O'Dea, N.R. and R. L. Haedrich. 2002. A Review of the Status of the Atlantic Wolffish, *Anarhichas lupus*, in Canada. *The Canadian Naturalist*. 116:423-432.